

pollen to be bad, as usual in hybrids, 95 per cent. of the grains being empty sacs without fovilla.

The denoting of hybrids by pedigrees of descent instead of names, as was Caspary's custom, is rather disturbing to a binomial system. I have, therefore, suggested a needed name. Mr. Thomas Morong has described, as *Nuphar rubrodiscum*, a Lake Champlain form which has sound pollen grains and fruits freely; he regards it as "a new and perfect species," developed from the hybrid, and synonymous with the *Nuphar luteum* of Gray's Manual, (Botanical Gazette, XI, p. 167. July, 1886.) This is *Nymphaea rubrodisea*, Greene, Bulletin Torrey Bot. Club, March, 1888, p. 84.

4.—*N. PUMILA*, Hoffm., Deutschlands Flora, (1800), p. 241. (Smith). *N. lutea* β *minima*, Will., Sp. Pl., II, p. 1151. *Nuphar minimum*, Smith, E. Bot., t. 2252, (1811.) Rees's Cyc., XXV. *Nuphar pumilum*, Sm., Eng. Fl., III, p. 16. Lawson, Water Lilies, p. 101.

Mountain Lakes of Scotland and other parts of Northern Europe, rare.

5.—*N. MICROPHYLLA*, Persoon, Synops. Plantarum, II, p. 63, (1807). Britten, Jour. Bot., XXVI, p. 9.

N. lutea β . *Kalmiana*, Michaux, Fl. B. A., I, p. 311, (1803).

N. Kalmiana, Sims, Bot. Mag., t. 1243, (1809).

Nuphar Kalmianum, R. Br., Ait. Hort. Kew., ed. 2., III, p. 295, (1811). Smith, Rees's Cyc., XXV. DC., Syst., V, p. 61, (ex. syn. Walt. Fl. Car.) Pursh. Barton. Hooker. Gray. Wood.

Nuph. luteum var. *Kalmianum*, Torr. and Gray, Fl. I, p. 58.

Nuph. luteum var. *pumilum*, Gray, Manual, ed. 5, p. 57. Macoun, Cat. Can. Pl.

Nymphaea lutea, Linn., Sp. Pl., ed. 2, p. 729, in part, (the Canadian plant from Kalm.) Canada and other parts of North America, not common.

6.—*N. POLYSEPALA*, Greene, Bulletin Torrey Bot. Club, March, 1888, p. 84.

Nuphar polysepalum, Engelm. in Trans. Acad. St. Louis, II, p. 282, (1865.) A. Gr., Proc. Am. Acad., VIII, p. 376. Macoun, Cat. Can. Pl., pp. 32 and 484. Porter, Fl. Colorado, p. 5.

This Western American plant is obviously nearly related to *Nuph. advena*, and when more carefully studied may come to be regarded as a variety of that species.

7.—*N. SAGITTIFOLIA*, Walter, Flora Carolina, p. 154, (1788).

N. longifolia, Michaux, Fl. B. A., I, p. 312, (1803).

N. sagittifolia, Salisbury, Ann. Bot. II, p. 71, (1805).

N. sagittata, Pers., Synop., (1807.)

Nuphar sagittifolium, Pursh., Fl. Am. Sep., II, p. 370 (1814.) Morong, Bot. Gaz., XI, p. 169.

Nuphar longifolium, Smith, Rees's Cyc., XXV.

This may probably be a southern form of *Nuph. advena*.

8.—*N. JAPONICA*.

Nymphaea lutea, Thunb., Fl. Jap., (ex. syn.)

Nuphar Japonicum, DC., Syst., II, p. 62, Prod., I, p. 116.

Japan.